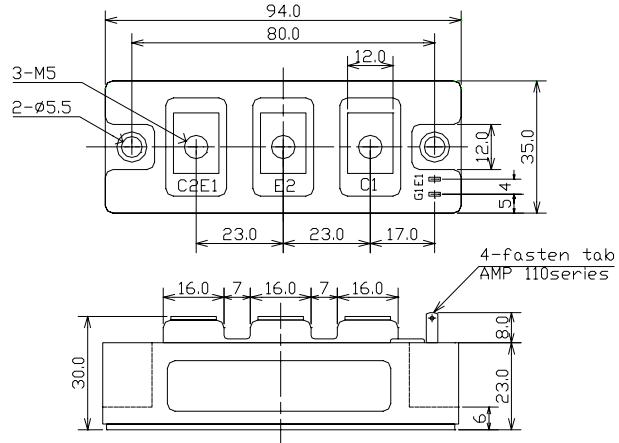
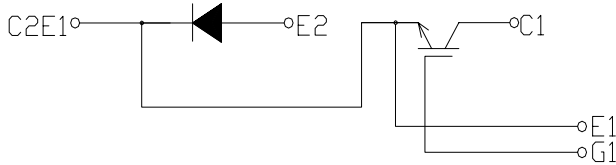


回路図 : *CIRCUIT*

外形寸法図 : *OUTLINE DRAWING*

Dimension: [mm]



最大定格 : *MAXIMUM RATINGS* ($T_c = 25$)

重量 : 220g

| Item | Symbol | Rated Value | Unit |
|--|-----------|-------------------------|----------|
| コレクタ・エミッタ間電圧 Collector-Emitter Voltage | V_{CES} | 600 | V |
| ゲート・エミッタ間電圧 Gate-Emitter Voltage | V_{GES} | ± 20 | V |
| コレクタ電流 Collector Current | I_C | DC | 50 |
| | | 1ms | 100 |
| コレクタ損失 Collector Power Dissipation | P_C | 250 | W |
| 接合温度 Junction Temperature Range | T_j | -40 ~ +150 | |
| 保存温度 Storage Temperature Range | T_{stg} | -40 ~ +125 | |
| 絶縁耐圧(Terminal to Base AC,1minute) Isolation Voltage | V_{iso} | 2,500 | V (RMS) |
| 締め付けトルク Mounting Torque | F_{tor} | Module Base to Heatsink | 2 (20.4) |
| | | Busbar to Main Terminal | |

電気的特性 : *ELECTRICAL CHARACTERISTICS* ($T_c = 25$)

| Characteristic | Symbol | Test Condition | Min. | Typ. | Max. | Unit |
|--|-----------------------|--|------|-------|------|---------|
| コレクタ遮断電流 Collector-Emitter Cut-Off Current | I_{CES} | $V_{CE} = 600V, V_{GE} = 0V$ | - | - | 1.0 | mA |
| ゲート漏れ電流 Gate-Emitter Leakage Current | I_{GES} | $V_{GE} = \pm 20V, V_{CE} = 0V$ | - | - | 1.0 | μA |
| コレクタ・エミッタ間飽和電圧 Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C = 50A, V_{GE} = 15V$ | - | 2.0 | 2.5 | V |
| ゲートしきい値電圧 Gate-Emitter Threshold Voltage | $V_{GE(th)}$ | $V_{CE} = 5V, I_C = 50mA$ | 4.0 | - | 8.0 | V |
| 入力容量 Input Capacitance | C_{ies} | $V_{CES} = 10V, V_{GE} = 0V, f = 1MHz$ | - | 5,000 | - | pF |
| スイッチング時間 Switching Time | 上昇時間 Rise Time | $V_{CC} = 300V$ $R_L = 6$ $R_G = 15$ $V_{GE} = \pm 15V$ | - | 0.15 | 0.30 | μs |
| | ターンオン時間 Turn-on Time | | - | 0.25 | 0.40 | |
| | 下降時間 Fall Time | | - | 0.20 | 0.35 | |
| | ターンオフ時間 Turn-off Time | | - | 0.45 | 0.70 | |

フリーホイーリングダイオードの特性 : *FREE WHEELING DIODE RATINGS & CHARACTERISTICS* ($T_c = 25$)

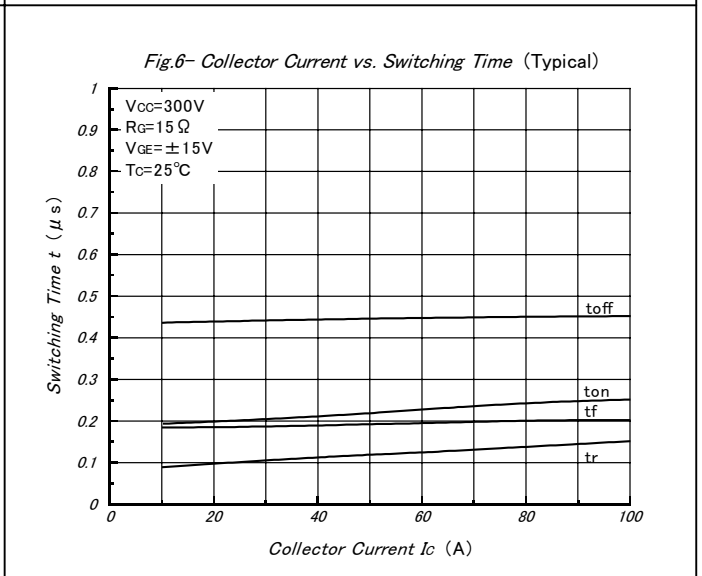
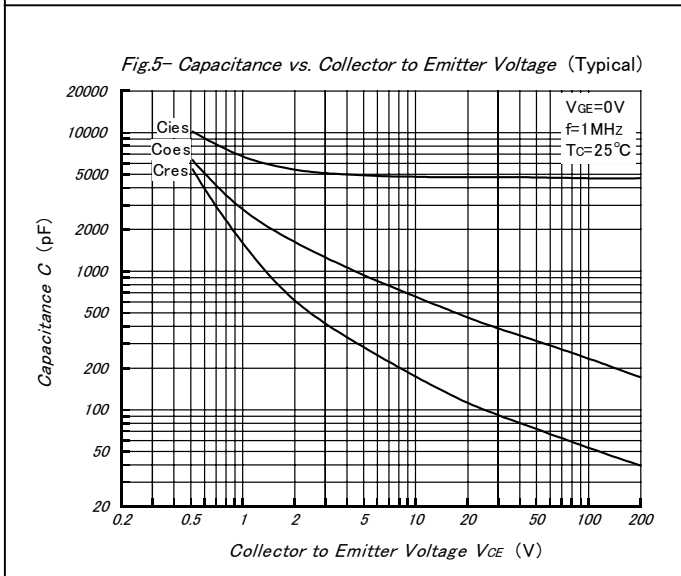
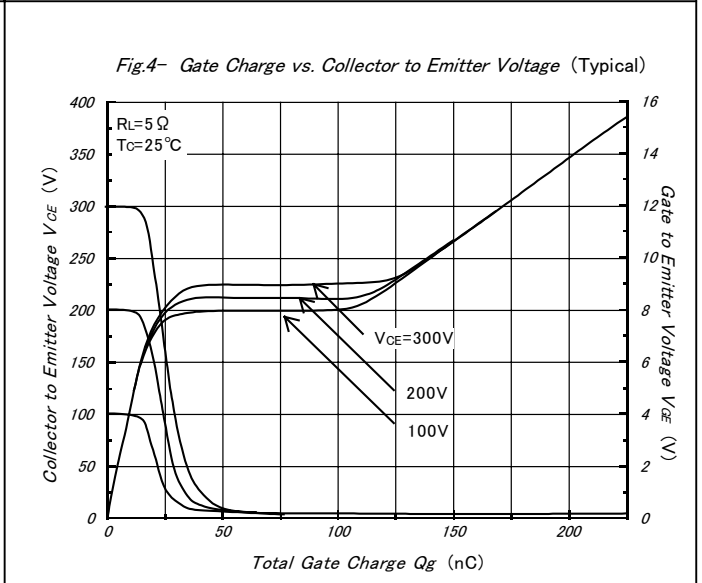
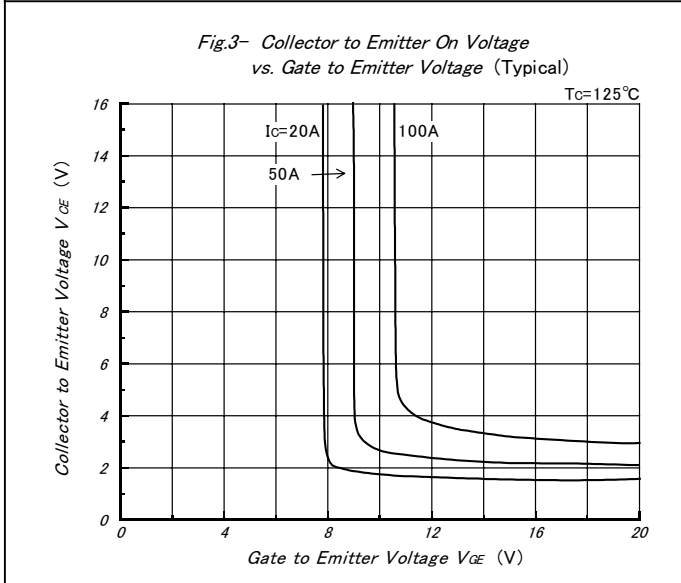
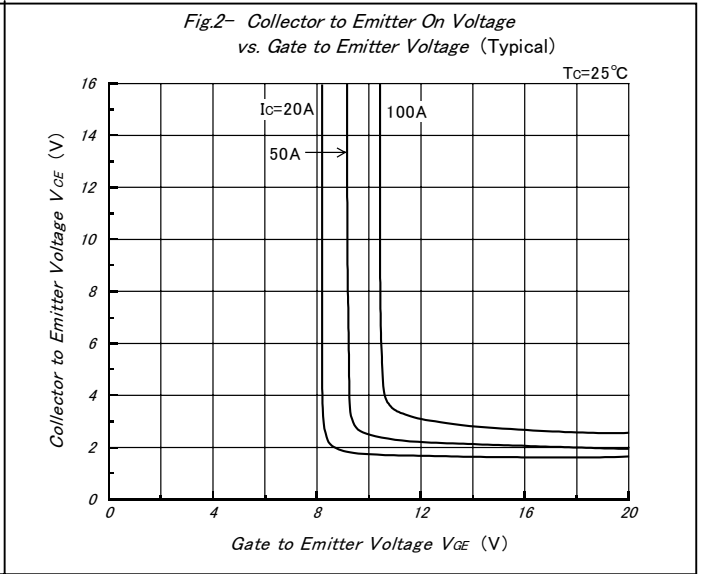
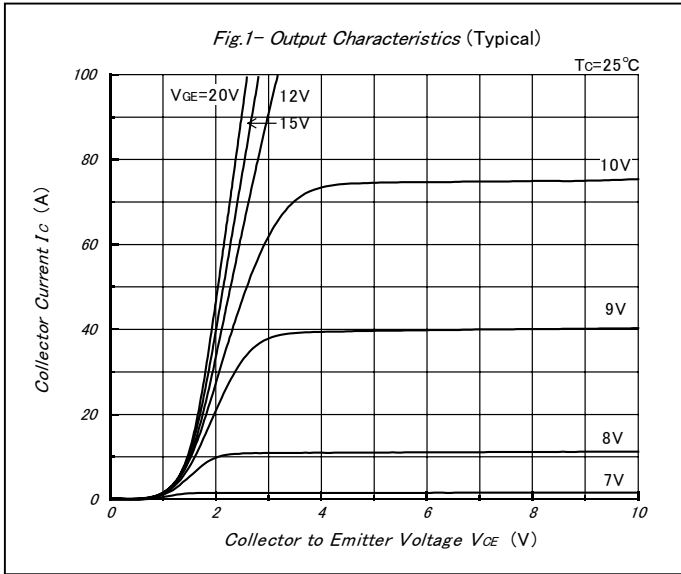
| Item | Symbol | Rated Value | Unit |
|------------------------|--------|-------------|------|
| 順電流 Forward Current | I_F | DC | 50 |
| | | 1ms | 100 |

| Characteristic | Symbol | Test Condition | Min. | Typ. | Max. | Unit |
|--------------------------------|----------|---|------|------|------|---------|
| 順電圧 Peak Forward Voltage | V_F | $I_F = 50A, V_{GE} = 0V$ | - | 1.9 | 2.4 | V |
| 逆回復時間 Reverse Recovery Time | t_{rr} | $I_F = 50A, V_{GE} = -10V$ $di/dt = 50A/\mu s$ | - | 0.15 | 0.25 | μs |

熱的特性 : *THERMAL CHARACTERISTICS*

| Characteristic | Symbol | Test Condition | Min. | Typ. | Max. | Unit |
|--------------------------|---------------|----------------|------|------|------|------|
| 熱抵抗 Thermal Impedance | $R_{th(j-c)}$ | IGBT | - | - | 0.50 | /W |
| | | Diode | - | - | 1.00 | |

PCHMB50A6



PCHMB50A6

Fig.7- Series Gate Impedance vs. Switching Time (Typical)

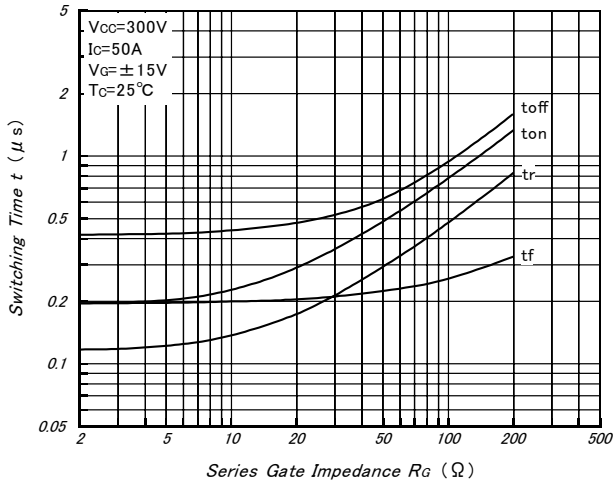


Fig.8- Forward Characteristics of Free Wheeling Diode (Typical)

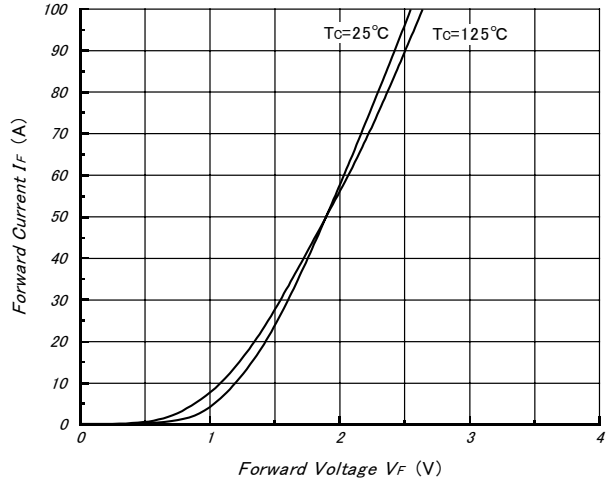


Fig.9- Reverse Recovery Characteristics (Typical)

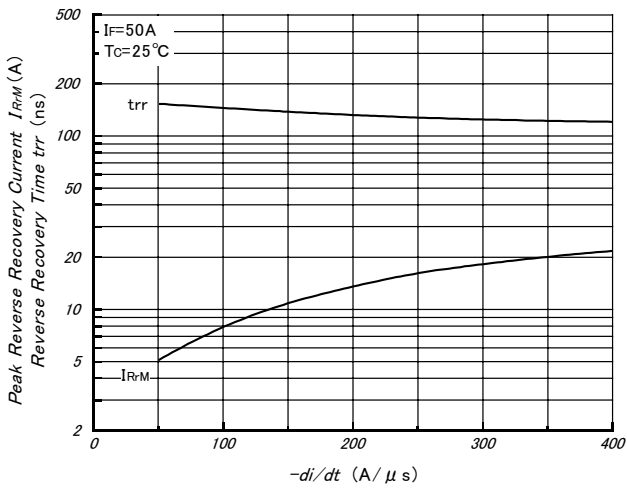


Fig.10- Reverse Bias Safe Operating Area (Typical)

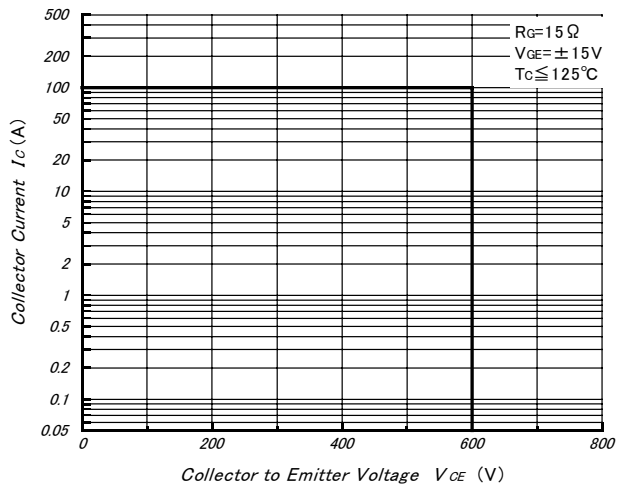


Fig.11- Transient Thermal Impedance

